UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

INNOMEMORY, LLC, *Plaintiff*, v. KIOXIA AMERICA, INC., *Defendant*.	Case No. 6:22-cv-479 JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff InnoMemory, LLC ("Plaintiff" or "InnoMemory") files this original complaint for patent infringement against Defendant Kioxia America, Inc. ("Defendant" or "Kioxia") and alleges as follows:

PARTIES

1.   Plaintiff InnoMemory is a Texas limited liability company with a principal place of business at 106 E 6th St., Suite 900, Austin, TX 78701. Plaintiff is the owner by assignment of a large portfolio of memory device patents.
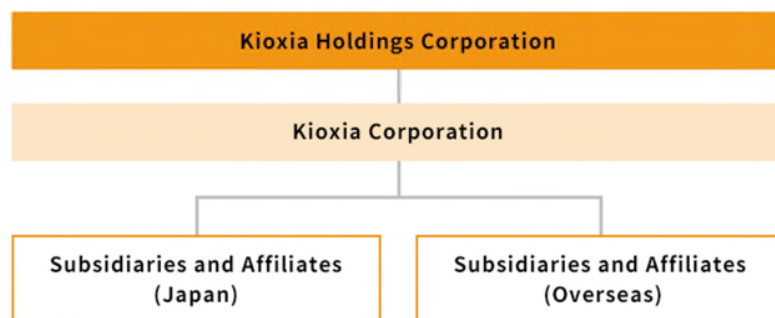
2.   Upon information and belief, Defendant Kioxia is a California corporation with a principal place of business at 2610 Orchard Parkway, San Jose, CA 95134.

3.   Upon information and belief, Defendant has registered to conduct business in the State of Texas since at least 2017. Defendant may be served through its registered agent: CT Corporation System, 1999 Bryan St., Suite 900, Dallas, TX 75201.

4.   Upon information and belief, Defendant has a regular and established place of business at 801 E. Old Settlers Blvd., Suite 110, Round Rock, TX 78664.

5.   Upon information and belief, Defendant is an overseas subsidiary/affiliate of Kioxia Corporation and Kioxia Holdings Corporation ("Kioxia Group").

Kioxia Group is the world leader in memory solutions, dedicated to the development, production and sale of flash memory and solid state drives (SSDs). Kioxia Group comprises Kioxia Holdings, its 19 subsidiaries (4 in Japan and 15 overseas) and 6 affiliated companies (4 in Japan and 2 overseas).

6.   Upon information and belief, Defendant's operations include "research, development and marketing of memory and SSD products[.]" *See* https://www.kioxia-holdings.com/en-jp/about/global-network.html.

JURISDICTION AND VENUE

7.   This is an action for patent infringement arising under 35 U.S.C. § 271, *et seq*. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. § 1331 and § 1338(a).

8.   This Court has specific personal jurisdiction over Defendant for at least the following reasons: (1) Defendant is present within and has minimum contacts within the State of Texas; (2) Defendant has purposefully availed itself of the privileges of conducting business in the State of Texas; (3) Defendant has sought protection and benefit from the laws of the State of Texas; and (4) Defendant has engaged in substantial and regular business activities within the State of

Texas, and has committed and/or induced specific acts of patent infringement here, thereby directly giving rise to this action.

9.   Venue is proper in this District pursuant to 28 U.S.C. § 1400(b). Defendant has committed and/or induced acts of infringement in this District and has a regular and established place of business in this District at 801 E. Old Settlers Blvd., Suite 110, Round Rock, TX 78664.

U.S. PATENT NO. 7,057,960

10.   U.S. Patent No. 7,057,960 ("the '960 Patent") is entitled "METHOD AND ARCHITECTURE FOR REDUCING THE POWER CONSUMPTION FOR MEMORY DEVICES IN REFRESH OPERATIONS" and teaches a method for reducing power consumption during background operations in a memory array with a plurality of sections comprising the steps of (i) controlling the background operations in one or more sections of the memory array in response to one or more control signals and (ii) presenting the one or more control signals and one or more decoded address signals to one or more periphery array circuits of the one or more sections. *See* the '960 Patent, attached hereto as Exhibit A.

11.   On June 6, 2006, the '960 Patent was duly issued by the USPTO.

12.   Plaintiff is the current assignee of the '960 Patent with all substantive rights in and to the '960 Patent, including the sole and exclusive right to prosecute this action and enforce the '960 Patent against infringers, and to collect damages for all relevant times.

COUNT I – DIRECT INFRINGEMENT OF U.S. PATENT NO. 7,057,960

13.   Defendant and its end-user customers, in violation of 35 U.S.C. § 271(a), have directly infringed, literally or under the doctrine of equivalents, and continue to infringe method claims of the '960 Patent by using various solid-state drives, including but not limited to the cSSD XG6 Series, which comprise Nanya Technology Corporation LPDDR3 4Gb/8Gb (DDP) SDRAM

(collectively, the "Accused Product"), that practice a method for reducing power consumption during background operations in a memory array with a plurality of sections.

14.   Specifically, Defendant and its end-user customers have directly infringed method claim 1 of the '960 Patent by using the Accused Product, at least in the manner of internal use and testing within the United States. For example, Defendant practiced every element of method claim 1 at least when the Accused Product was internally developed and tested by Defendant and further when placed into its intended operation to be used by Defendant's customers. *See* Exemplary Infringement Chart, attached as Exhibit B.

15.   As shown in the Exemplary Infringement Chart of Exhibit B, Defendant performed and continues to perform a method for reducing power consumption during background operations in a memory array with a plurality of sections. This element is infringed literally, or in the alternative, under the doctrine of equivalents. For example, Defendant uses solid-state drives, such as the XG6 Series, which comprise LPDDR3 SDRAM memory based on the JEDEC Low Power Double Data Rate 3 (LPDDR3) RAM industry standard. These memory devices consume less power by reducing power consumption during refresh operations (*i.e.*, "background operation") performed on a memory array. For example, LPDDR3 SDRAM works in a Self-Refresh Mode which enables the refresh operation in selected memory banks (*i.e.*, "a plurality of sections") of a SDRAM memory (*i.e.*, "a memory array"). When SDRAM is in Self Refresh Mode, the refresh operation is programmed to limit access to a portion of the memory's array by utilizing the Partial Array Self Refresh (PASR) Bank Mask and Segment Mask settings of the SDRAM. *See* Ex. B.

16.   Defendant performs the step of controlling said background operations in each of said plurality of sections of said memory array in response to one or more control signals, wherein said one or more control signals are generated in response to a programmable address signal and

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said background operations can be enabled simultaneously in two or more of said plurality of sections independently of any other section. This element is infringed literally, or in the alternative, under the doctrine of equivalents. For example, the XG6 Series with LPDDR3 SDRAM uses mode registers MR16 and MR17 with eight bits for Partial Array Self Refresh (PASR) Bank Mask settings and eight bits for Partial Array Self Refresh (PASR) Segment Mask settings, respectively, to control said background operations. The bits in the MR16 and MR17 registers are programmed to "0B" (unmasked, default) or "1B" (masked) (*i.e.*, "a programmable address signal") to control refresh operation of the entire memory within a memory bank. When a bit corresponding to a bank is masked, a refresh operation to the entire bank is blocked in self-refresh mode. When a bit corresponding to a bank is unmasked, a refresh operation is enabled for that bank. The bits in the MR16 and MR17 registers are used to control the section(s) of the memory array on which the Self Refresh operation (*i.e.*, "background operation") is enabled or disabled. After the address bits are coded in the MR16 and MR17 registers, the Self-Refresh operation is executed on the particular sections of the memory array. Further, in LPDDR3 SDRAM, a SELF REFRESH command initiates Self Refresh mode in which the device is refreshed as defined by the MR16 and MR17 registers. The PASR Bank Mask and Segment Mask bits enable the device to control the refresh operation in the different memory banks (*i.e.*, "plurality of sections") of a SDRAM memory chip (*i.e.*, "memory array"). *See* Ex. B.

17.   Defendant performs the step of presenting said one or more control signals and one or more decoded address signals to one or more periphery array circuits of said plurality of sections. This element is infringed literally, or in the alternative, under the doctrine of equivalents. For example, LPDDR3 SDRAM has periphery array circuits (including but not limited to Column Address Counter, Column Decoders, Row Decoders, and I/O Bus.). These periphery circuits are

used to provide control (*i.e.*, "control signals") and address signals (*i.e.*, "decoded address signals") to the memory banks. *See* Ex. B.

18.   Plaintiff has been damaged by the infringing conduct by Defendant in an amount to be determined at trial. Thus, Defendant is liable to Plaintiff in an amount that adequately compensates Plaintiff for such infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II – INDUCED INFRINGEMENT OF U.S. PATENT NO. 7,057,960

19.   Defendant, in violation of 35 U.S.C. § 271(b), has indirectly infringed, literally or under the doctrine of equivalents, method claim 1 of the '960 Patent, as outlined, by actively inducing their customers to practice the method of claim 1 via use of the Accused Product in an infringing manner.

20.   Defendant has had knowledge and notice of the '960 Patent and the infringement by the Accused Product since at least the filing date of this complaint.

21.   Despite such notice, Defendant has continued to provide the Accused Product to its customers and, on information and belief, posted Product Briefs outlining the infringing capabilities and specifications of the Accused Product. *See* Product Brief, at https://business.kioxia.com/content/dam/kioxia/shared/business/ssd/doc/cSSD-XG6-product-brief.pdf. As such, Defendant has knowingly and intentionally encouraged and aided at least its end-user customers to directly infringe the '960 Patent.

22.   Defendant's end-user customers directly infringe claim 1 of the '960 Patent by using the Accused Product in their intended manner to infringe. Defendant induces such infringement by marketing and selling the Accused Product and posting Product Briefs that enable

and facilitate infringement, while knowing of, or being willfully blind to the existence of the '960 Patent.

23. On information and belief, Defendant specifically intends that its actions will result in infringement of the '960 Patent, or subjectively believes that its actions will result in infringement of the '960 Patent. Therefore, Defendant's induced infringement of the '960 Patent is exceptional and entitles Plaintiff to recover attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

24. Plaintiff is entitled to recover from Defendant all damages that Plaintiff has sustained as a result of Defendant's infringement of the '960 Patent, including, without limitation, a reasonable royalty to be determined at trial.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that the Court enter:

a. A judgment in favor of Plaintiff that Defendant has infringed and induced others to infringe the '960 Patent;

b. a judgment and order requiring Defendant to pay to Plaintiff its damages, costs, expenses, and prejudgment and post-judgment interest for Defendant's infringement of the '960 Patent as provided under 35 U.S.C. § 284, and an accounting of ongoing post-judgment infringement; and

c. any and all other relief, at law or equity, to which Plaintiff may show itself to be entitled.

DEMAND FOR JURY TRIAL

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

DATED: May 11, 2022   Respectfully submitted,

By: */s/ Neal Massand*
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ATTORNEY FOR PLAINTIFF
INNOMEMORY, LLC

CERTIFICATE OF SERVICE

      I hereby certify that on May 11, 2022, I electronically filed the foregoing document with the clerk of the court for the U.S. District Court, Western District of Texas, Waco Division using the electronic case filing system of the court. The electronic case filing system sent a "Notice of Electronic Filing" to the attorneys of record who have consented in writing to accept this Notice as service of this document by electronic means.

                              /s/ Neal Massand
                              Neal Massand